Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An observing tool comprising a structure, for use of storing an observation target, that is used in an observing method which ~~observes an~~ observes the observation target, by illuminating the observation target with vertical lighting via an optical system having an objective lens, wherein

said structure has a depressed area to hold the observation target together with a ~~solution, and~~solution,

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when the observation is ~~performed.~~performed, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

2. (currently amended) An observing tool comprising a structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which ~~observes an~~ observes the observation target, by

illuminating the observation target with vertical lighting via an optical system having an objective lens, wherein

said structure has a depressed area to hold the observation target together with a ~~solution, and~~solution,

a surface different from a surface having said depressed area is provided with a reflection plane to reflect said vertical lighting when an observation is ~~performed.~~performed, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

3. (currently amended) An observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which ~~observes an~~ observes the observation target, by illuminating the observation target with vertical lighting via an optical system having an objective lens, wherein,

said observing tool has a second structure,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when an observation is ~~performed, and~~performed,

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second ~~structure.~~structure, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

4. (currently amended) An observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, that is used in an observing method which ~~observes an~~ observes the observation target, by illuminating the observation target with vertical lighting via an optical system having an objective lens, wherein,

said observing tool has a second structure to allow said vertical lighting to pass through,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when an observation is ~~performed, and~~performed,

~~a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure.~~

a surface different from a surface of a first structure, where a depressed area is provided, and a surface different from a reflection plane of a second structure, are overlapped, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

5.-6. (canceled)

7. (currently amended) An observing method which utilizes an observing tool comprising a structure, for use of storing an observation target, and observes the observation target by illuminating the observation target with vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

said structure has a depressed area to hold the observation target together with a solution,

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when observation is ~~performed, and~~performed,

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing ~~tool.~~tool, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

8. (currently amended) An observing method which utilizes an observing tool comprising a structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the observation target with a vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

said structure has a depressed area to hold the observation target together with a solution,

a bottom of said depressed area is provided with a reflection plane to reflect said vertical lighting when observation is ~~performed, and~~performed,

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing ~~tool.~~tool, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

9. (currently amended) An observing method which utilizes an observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the observation target with a vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

said observing tool has a second structure,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when observation is performed,

a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second ~~structure, and~~structure,

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing ~~tool.~~tool, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

10. (currently amended) An observing method which utilizes an observing tool comprising a first structure allowing an illumination light to pass through, for use of storing an observation target, and observes the observation target by illuminating the observation target with a vertical lighting via an optical system having an objective lens, wherein,

said observation target is a micro transparent object,

said observing tool has a second structure to allow said vertical lighting to pass through,

said first structure has a depressed area to hold the observation target together with a solution,

said second structure is provided with a reflection plane to reflect said vertical lighting when observation is performed,

~~a surface of said first structure, different from a surface on which said depressed area is provided, is superimposed on the reflection plane of said second structure, and~~

a surface different from a surface of a first structure, where a depressed area is provided, and a surface different from a reflection plane of a second structure, are overlapped,

said micro transparent object disposed in a specific distance from said reflection plane is observed by use of said observing ~~tool.~~tool, and

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane satisfies the following formula,

$d > F/(4\tan(\sin^{-1}NA))$

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *F* represents a visual field diameter of the optical system, and *NA* represents a numerical aperture of the optical system).

11. (canceled)

12. (previously presented) The observing method according to claim 7, wherein,

said observation target is a cell, and

said liquid is a culture solution.

13. (previously presented) The observing method according to claim 7, wherein,

said observation target is stored in said observing tool so that a distance between said observation target and said reflection plane becomes a half or less than the focal depth of said optical system.

14. (currently amended) The observing method according to Claim 7, wherein,

said observation target is stored in said observing tool so that distance *d* between the observation target and the reflection plane further satisfies the following formula, ~~formula (1),~~

$d \leq W/(2NA^2)$ ~~... (1)~~

(where in the formula, *d* represents the distance between the observation target and the reflection plane, *W* represents a wavelength of the light employed in the observation, and *NA* represents a numerical aperture of the optical system).

15. (previously presented) The observing method according to Claim 7, wherein,

said observation target is stored in said observing tool so that the numerical aperture of the illumination light against the observation target becomes smaller than the numerical apertures of the objective lens.

16. (canceled)